

10/734, 019  
CL 1, F(1) + F(2)

(FILE 'HOME' ENTERED AT 09:47:35 ON 20 MAR 2005)

FILE 'REGISTRY' ENTERED AT 09:47:43 ON 20 MAR 2005

L1               STRUCTURE UPLOADED  
L2               STRUCTURE UPLOADED  
L3               4 S L1 FULL  
L4               1 S L2 FULL

FILE 'CAPLUS' ENTERED AT 09:49:34 ON 20 MAR 2005

L5               2 S L3  
L6               1 S L4  
L7               STRUCTURE UPLOADED  
L8               STRUCTURE UPLOADED

FILE 'REGISTRY' ENTERED AT 10:01:01 ON 20 MAR 2005

L9               5 S L7 FULL  
L10              3 S L8 FULL

FILE 'CAPLUS' ENTERED AT 10:01:22 ON 20 MAR 2005

L11              4 S L9  
L12              3 S L10

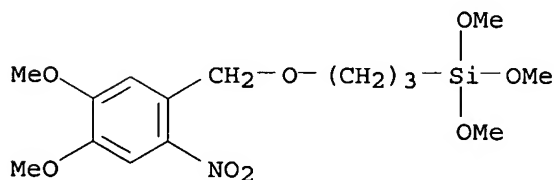
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L5 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:550626 CAPLUS  
 DN 141:114085  
 TI Image forming composition for photosensitive lithographic plate  
 IN Ozaki, Jun  
 PA Okamoto Chemical Industry Co., Ltd., Japan  
 SO U.S. Pat. Appl. Publ., 15 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

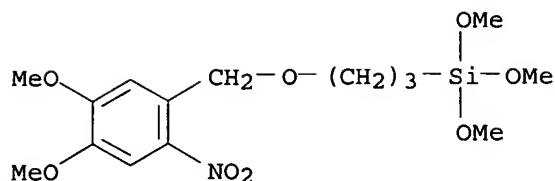
my APP.

|      | PATENT NO.                                                                                                                    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
| PI   | US 2004131967                                                                                                                 | A1   | 20040708 | US 2003-734019  | 20031211 |
|      | JP 2004212752                                                                                                                 | A2   | 20040729 | JP 2003-796     | 20030107 |
|      | CA 2448029                                                                                                                    | AA   | 20040707 | CA 2003-2448029 | 20031103 |
|      | EP 1437625                                                                                                                    | A1   | 20040714 | EP 2003-257330  | 20031120 |
|      | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK |      |          |                 |          |
| PRAI | JP 2003-796                                                                                                                   | A    | 20030107 |                 |          |

OS MARPAT 141:114085  
 AB The present invention provides image-forming compns. and photosensitive lithog. plates which are excellent in sensitivity to IR radiation, latitude of development, treatable area in m2, and printing durability. Specifically, the present invention provides an image-forming composition comprising (A) a polymeric compound obtainable by the addition reaction of a resinous polymer having one or more phenolic hydroxyl groups with a silane coupling agent of the following general formula I or II (X1, X2 = trimethoxysilyl; G1 = O, COO; R1, R2 = H, methoxy; R3 = (CH2)m which may have a hydrocarbon side chain; G2 = O, COO; R4 = H, alkyl; R5 = (CH2)n which may have a hydrocarbon side chain), (B) an acid generator, (C) an IR absorber, and (D) an alkali-soluble resin, and a photosensitive lithog. plate having this image-forming composition applied onto a substrate.  
 IT 609355-39-7DP, reaction products with styrene-vinylphenol copolymer and cresol novolak resin 609355-39-7P  
 609355-40-0DP, reaction products with pyrogallol-acetone resin 609355-40-0P  
 RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (image forming composition for photosensitive lithog. plate)  
 RN 609355-39-7 CAPLUS  
 CN Silane, [3-[(4,5-dimethoxy-2-nitrophenyl)methoxy]propyl]trimethoxy- (9CI)  
 (CA INDEX NAME)

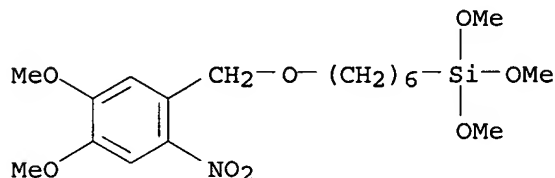


RN 609355-39-7 CAPLUS  
 CN Silane, [3-[(4,5-dimethoxy-2-nitrophenyl)methoxy]propyl]trimethoxy- (9CI)  
 (CA INDEX NAME)



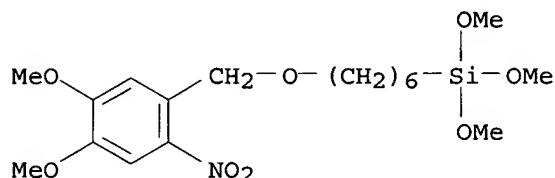
RN 609355-40-0 CAPLUS

CN Silane, [6-[(4,5-dimethoxy-2-nitrophenyl)methoxy]hexyl]trimethoxy- (9CI)  
(CA INDEX NAME)



RN 609355-40-0 CAPLUS

CN Silane, [6-[(4,5-dimethoxy-2-nitrophenyl)methoxy]hexyl]trimethoxy- (9CI)  
(CA INDEX NAME)



L5 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:805778 CAPLUS

DN 139:292355

TI Preparation of silane coupling agent

IN Yamaguchi, Kazuo; Ozaki, Atsushi

PA Okamoto Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003292496  | A2   | 20031015 | JP 2002-100926  | 20020403 |
| PRAI | JP 2002-100926 |      | 20020403 |                 |          |

OS MARPAT 139:292355

AB The patent relates to the preparation of nitrobenzyl alkoxy-silyl derivs. I (G1 = O, COO; R1, R2 = H, methoxy etc.; R3 = methylene, alkylene etc.; X1 = trimethoxysilyl, triethoxysilyl; and R = H, alkyl etc.) as coupling agent useful for surface treatment of silicon wafer. Thus, 4,5-dimethoxy-2-nitrobenzyl 6-(trimethoxysilyl)hexyl ether prepared by reacting 5-hexenyl 4,5-dimethoxy-2-nitrobenzyl ether with trimethoxysilane was formulated in a composition comprising CST-70, CST-15, PSF2803, PSF2807, oil blue-613, and MEK to form a photo imaging solution which was coated on aluminum and gave pos. type picture after irradiation with mercury lamp at 365 nm.

IT 609355-39-7P 609355-40-0P 609355-41-1P

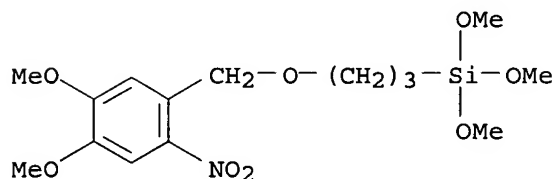
609355-47-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of nitrobenzyl alkoxysilyl coupling agent)

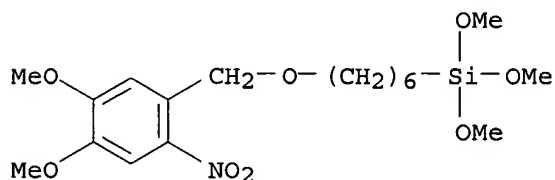
RN 609355-39-7 CAPLUS

CN Silane, [3-[(4,5-dimethoxy-2-nitrophenyl)methoxy]propyl]trimethoxy- (9CI)  
(CA INDEX NAME)



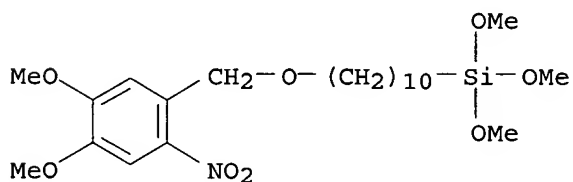
RN 609355-40-0 CAPLUS

CN Silane, [6-[(4,5-dimethoxy-2-nitrophenyl)methoxy]hexyl]trimethoxy- (9CI)  
(CA INDEX NAME)



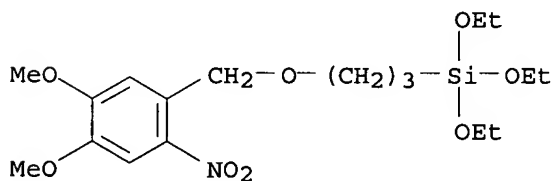
RN 609355-41-1 CAPLUS

CN Silane, [10-[(4,5-dimethoxy-2-nitrophenyl)methoxy]decyl]trimethoxy- (9CI)  
(CA INDEX NAME)



RN 609355-47-7 CAPLUS

CN Silane, [3-[(4,5-dimethoxy-2-nitrophenyl)methoxy]propyl]triethoxy- (9CI)  
(CA INDEX NAME)



=>

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2003:805778 CAPLUS  
 DN 139:292355  
 TI Preparation of silane coupling agent  
 IN Yamaguchi, Kazuo; Ozaki, Atsushi  
 PA Okamoto Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

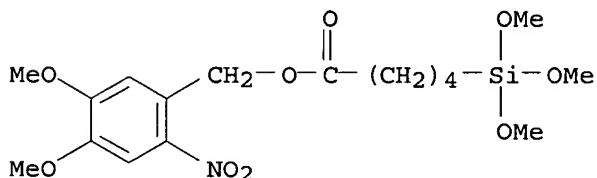
|      | PATENT NO.        | KIND | DATE     | APPLICATION NO. | DATE     |
|------|-------------------|------|----------|-----------------|----------|
| PI   | JP 2003292496     | A2   | 20031015 | JP 2002-100926  | 20020403 |
| PRAI | JP 2002-100926    |      | 20020403 |                 |          |
| OS   | MARPAT 139:292355 |      |          |                 |          |

AB The patent relates to the preparation of nitrobenzyl alkoxysilyl derivs. I (G1 = O, COO; R1, R2 = H, methoxy etc.; R3 = methylene, alkylene etc.; X1 = trimethoxysilyl, triethoxysilyl; and R = H, alkyl etc.) as coupling agent useful for surface treatment of silicon wafer. Thus, 4,5-dimethoxy-2-nitrobenzyl 6-(trimethoxysilyl)hexyl ether prepared by reacting 5-hexenyl 4,5-dimethoxy-2-nitrobenzyl ether with trimethoxysilane was formulated in a composition comprising CST-70, CST-15, PSF2803, PSF2807, oil blue-613, and MEK to form a photo imaging solution which was coated on aluminum and gave pos. type picture after irradiation with mercury lamp at 365 nm.

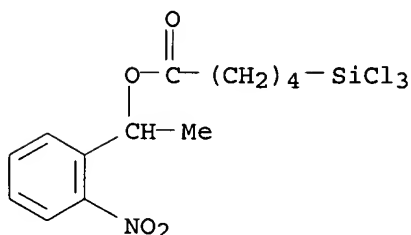
IT **609355-49-9P**  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of nitrobenzyl alkoxysilyl coupling agent)

RN 609355-49-9 CAPLUS

CN Pentanoic acid, 5-(trimethoxysilyl)-, (4,5-dimethoxy-2-nitrophenyl)methyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:1041299 CAPLUS  
 DN 142:151141  
 TI Photoactivation of a Substrate for Cell Adhesion under Standard  
 Fluorescence Microscopes  
 AU Nakanishi, Jun; Kikuchi, Yukiko; Takarada, Tohru; Nakayama, Hidekazu;  
 Yamaguchi, Kazuo; Maeda, Mizuo  
 CS Bioengineering Laboratory, RIKEN, Wako, Saitama, 351-0198, Japan  
 SO Journal of the American Chemical Society (2004), 126(50), 16314-16315  
 CODEN: JACSAT; ISSN: 0002-7863  
 PB American Chemical Society  
 DT Journal  
 LA English  
 AB Cell-culturing substrates where cell adhesion can be switched on by  
 external stimuli during cell cultivation are useful scaffolds for tissue  
 engineering, cell-based drug screening, and fundamental cellular studies.  
 Here, we show a new strategy for photoactivation of a substrate for cell  
 adhesion under standard fluorescence microscopes. A glass substrate chemical  
 modified with an alkylsiloxane having a photocleavable 2-nitrobenzyl group  
 was coated with bovine serum albumin to prevent cell adhesion. Upon  
 irradiation under a fluorescence microscope, the protein was replaced with  
 fibronectin, which made the irradiated region cell-adhesive. Subsequent  
 seeding of HEK293 or COS7 cells produced patterns corresponding to the  
 irradiated patterns. We succeeded for the first time in positioning  
 single cells in proximity to cultivating single cells. The present method  
 provides a general strategy for positioning single cells of same or  
 different types at any locations on the substrate and will be useful for  
 studying cell-cell interactions.  
 IT 404353-11-3P  
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);  
 BIOL (Biological study); PREP (Preparation)  
 (photoactivation of glass substrate coated with fibronectin for cell  
 adhesion under standard fluorescence microscopes)  
 RN 404353-11-3 CAPLUS  
 CN Pentanoic acid, 5-(trichlorosilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI)  
 (CA INDEX NAME)



RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2003:805778 CAPLUS  
 DN 139:292355  
 TI Preparation of silane coupling agent  
 IN Yamaguchi, Kazuo; Ozaki, Atsushi  
 PA Okamoto Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 19 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2003292496  | A2   | 20031015 | JP 2002-100926  | 20020403 |
| PRAI | JP 2002-100926 |      | 20020403 |                 |          |

OS MARPAT 139:292355

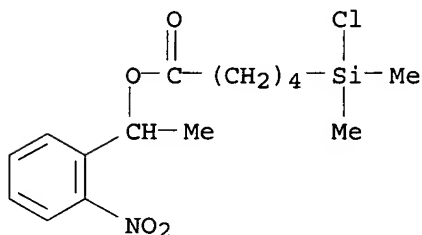
AB The patent relates to the preparation of nitrobenzyl alkoxysilyl derivs. I (G1 = O, COO; R1, R2 = H, methoxy etc.; R3 = methylene, alkylene etc.; X1 = trimethoxysilyl, triethoxysilyl; and R = H, alkyl etc.) as coupling agent useful for surface treatment of silicon wafer. Thus, 4,5-dimethoxy-2-nitrobenzyl 6-(trimethoxysilyl)hexyl ether prepared by reacting 5-hexenyl 4,5-dimethoxy-2-nitrobenzyl ether with trimethoxysilane was formulated in a composition comprising CST-70, CST-15, PSF2803, PSF2807, oil blue-613, and MEK to form a photo imaging solution which was coated on aluminum and gave pos. type picture after irradiation with mercury lamp at 365 nm.

IT 404353-10-2P 404353-11-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of nitrobenzyl alkoxysilyl coupling agent)

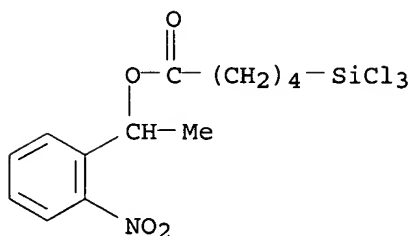
RN 404353-10-2 CAPLUS

CN Pentanoic acid, 5-(chlorodimethylsilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI) (CA INDEX NAME)



RN 404353-11-3 CAPLUS

CN Pentanoic acid, 5-(trichlorosilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:205086 CAPLUS

DN 136:247695

TI Nitrobenzyl group-containing chlorosilanes as coupling agents, and introduction of carboxy or hydroxy group to material surfaces using them

IN Yamaguchi, Kazuo; Futami, Tatsuhiro

PA Okamoto Kagaku Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

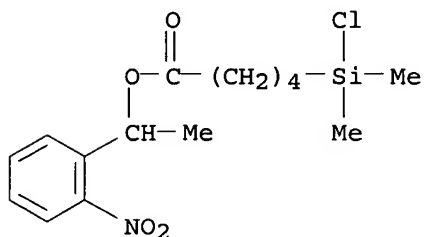
DT Patent

LA Japanese

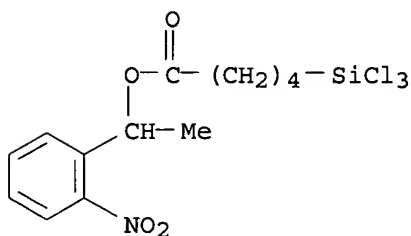
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

PI JP 2002080481 A2 20020319 JP 2000-269904 20000906  
 PRAI JP 2000-269904 20000906  
 OS MARPAT 136:247695  
 AB The compds. have SiClMe<sub>2</sub>, SiCl<sub>2</sub>Me, or SiCl<sub>3</sub> at one terminal and (α-substituted) p-nitrobenzyloxy group at the other terminal. 1-(2-Nitrophenyl)ethyl 4-pentenoate (preparation given) was hydrosilylated by HSiCl<sub>3</sub> in the presence of H<sub>2</sub>PtCl<sub>6</sub> to give 79% Cl<sub>3</sub>Si(CH<sub>2</sub>)<sub>4</sub>CO<sub>2</sub>CHMeC<sub>6</sub>H<sub>4</sub>NO<sub>2</sub>-o (I). A Si wafer was treated with C<sub>6</sub>H<sub>6</sub> solution of I and irradiated by UV to give a surface-modified wafer with high contact angle.  
 IT 404353-10-2P 404353-11-3P  
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses) (preparation of nitrobenzyl group-containing silane coupling agents)  
 RN 404353-10-2 CAPLUS  
 CN Pentanoic acid, 5-(chlorodimethylsilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI) (CA INDEX NAME)



RN 404353-11-3 CAPLUS  
 CN Pentanoic acid, 5-(trichlorosilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2000:176756 CAPLUS  
 DN 132:293809  
 TI Novel silane coupling agents containing a photolabile 2-nitrobenzyl ester for introduction of a carboxy group on the surface of silica gel  
 AU Yamaguchi, Kazuo; Kitabatake, Takashi; Izawa, Masashi; Fujiwara, Tomomichi; Nishimura, Hiroki; Futami, Tatsuhiko  
 CS Department of Materials Science, Faculty of Science, Kanagawa University, Kanagawa, 259-1293, Japan  
 SO Chemistry Letters (2000), (3), 228-229  
 CODEN: CMLTAG; ISSN: 0366-7022  
 PB Chemical Society of Japan  
 DT Journal  
 LA English  
 AB Silane coupling agents containing a carboxy group are not known because the chloro- or alkoxy group is reactive to the carboxylic acid. In this



study, silane coupling agents bearing a 2-nitrobenzyl ester, 2-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CHROCO(CH<sub>2</sub>)<sub>n</sub>-2CH:CH<sub>2</sub> (n = 4, R = H, Me; n = 10, R = H), as a protecting group of carboxylic acid were synthesized and applied for surface modification of silica gel followed by uv irradiation under neutral conditions to generate carboxy groups on the surface.

IT 264258-85-7DP, silica modified 264258-85-7P

264258-86-8DP, silica modified 264258-86-8P

264258-87-9DP, silica modified 264258-87-9P

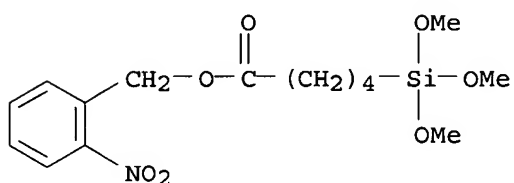
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of novel silane coupling agents containing photolabile nitrobenzyl

ester for introduction of a carboxy group on surface of silica gel)

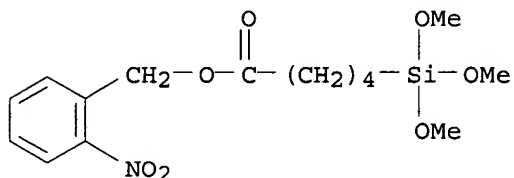
RN 264258-85-7 CAPLUS

CN Pentanoic acid, 5-(trimethoxysilyl)-, (2-nitrophenyl)methyl ester (9CI)  
(CA INDEX NAME)



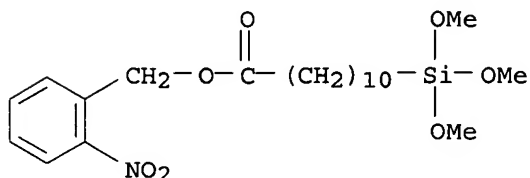
RN 264258-85-7 CAPLUS

CN Pentanoic acid, 5-(trimethoxysilyl)-, (2-nitrophenyl)methyl ester (9CI)  
(CA INDEX NAME)



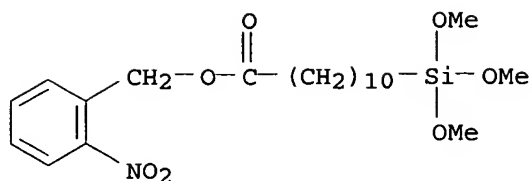
RN 264258-86-8 CAPLUS

CN Undecanoic acid, 11-(trimethoxysilyl)-, (2-nitrophenyl)methyl ester (9CI)  
(CA INDEX NAME)

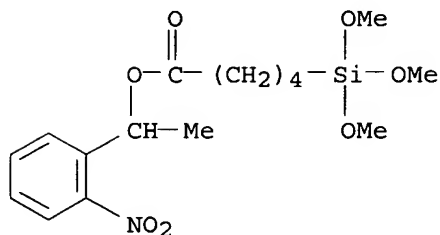


RN 264258-86-8 CAPLUS

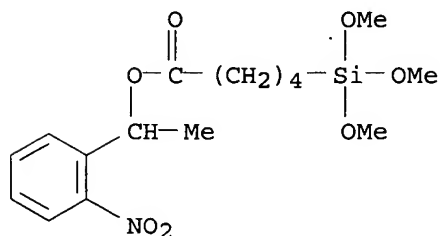
CN Undecanoic acid, 11-(trimethoxysilyl)-, (2-nitrophenyl)methyl ester (9CI)  
(CA INDEX NAME)



RN 264258-87-9 CAPLUS  
 CN Pentanoic acid, 5-(trimethoxysilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI)  
 (CA INDEX NAME)



RN 264258-87-9 CAPLUS  
 CN Pentanoic acid, 5-(trimethoxysilyl)-, 1-(2-nitrophenyl)ethyl ester (9CI)  
 (CA INDEX NAME)



RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d l12 1-3 bib ab hitstr

*my app*

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2004:550626 CAPLUS  
 DN 141:114085  
 TI Image forming composition for photosensitive lithographic plate  
 IN Ozaki, Jun  
 PA Okamoto Chemical Industry Co., Ltd., Japan  
 SO U.S. Pat. Appl. Publ., 15 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO.  | DATE     |
|----|---------------|------|----------|------------------|----------|
| PI | US 2004131967 | A1   | 20040708 | US 2003-734019 ✓ | 20031211 |
|    | JP 2004212752 | A2   | 20040729 | JP 2003-796      | 20030107 |
|    | CA 2448029    | AA   | 20040707 | CA 2003-2448029  | 20031103 |
|    | EP 1437625    | A1   | 20040714 | EP 2003-257330   | 20031120 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

PRAI JP 2003-796 A 20030107

OS MARPAT 141:114085

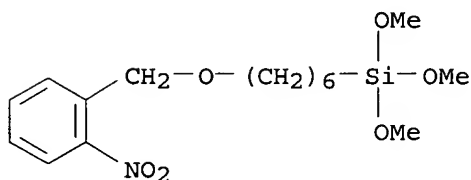
AB The present invention provides image-forming compns. and photosensitive lithog. plates which are excellent in sensitivity to IR radiation, latitude of development, treatable area in m<sup>2</sup>, and printing durability. Specifically, the present invention provides an image-forming composition comprising (A) a polymeric compound obtainable by the addition reaction of a resinous polymer having one or more phenolic hydroxyl groups with a silane coupling agent of the following general formula I or II (X1, X2 = trimethoxysilyl; G1 = O, COO; R1, R2 = H, methoxy; R3 = (CH<sub>2</sub>)<sub>m</sub> which may have a hydrocarbon side chain; G2 = O, COO; R4 = H, alkyl; R5 = (CH<sub>2</sub>)<sub>n</sub> which may have a hydrocarbon side chain), (B) an acid generator, (C) an IR absorber, and (D) an alkali-soluble resin, and a photosensitive lithog. plate having this image-forming composition applied onto a substrate.

IT 717915-94-1DP, reaction products with styrene-vinylphenol copolymer 717915-94-1P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(image forming composition for photosensitive lithog. plate)

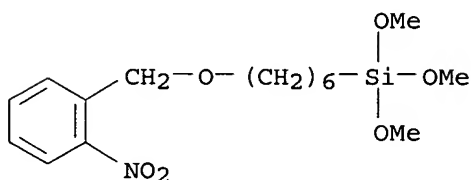
RN 717915-94-1 CAPLUS

CN Silane, trimethoxy[6-[(2-nitrophenyl)methoxy]hexyl]- (9CI) (CA INDEX NAME)



RN 717915-94-1 CAPLUS

CN Silane, trimethoxy[6-[(2-nitrophenyl)methoxy]hexyl]- (9CI) (CA INDEX NAME)



L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:805778 CAPLUS

DN 139:292355

TI Preparation of silane coupling agent

IN Yamaguchi, Kazuo; Ozaki, Atsushi

PA Okamoto Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|    | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|----|---------------|------|----------|-----------------|----------|
| PI | JP 2003292496 | A2   | 20031015 | JP 2002-100926  | 20020403 |

PRAI JP 2002-100926

20020403

OS MARPAT 139:292355

AB The patent relates to the preparation of nitrobenzyl alkoxysilyl derivs. I (G1 = O, COO; R1, R2 = H, methoxy etc.; R3 = methylene, alkylene etc.; X1 = trimethoxysilyl, triethoxysilyl; and R = H, alkyl etc.) as coupling agent useful for surface treatment of silicon wafer. Thus, 4,5-dimethoxy-2-nitrobenzyl 6-(trimethoxysilyl)hexyl ether prepared by reacting 5-hexenyl 4,5-dimethoxy-2-nitrobenzyl ether with trimethoxysilane was formulated in a composition comprising CST-70, CST-15, PSF2803, PSF2807, oil blue-613, and MEK to form a photo imaging solution which was coated on aluminum and gave pos. type picture after irradiation with mercury lamp at 365 nm.

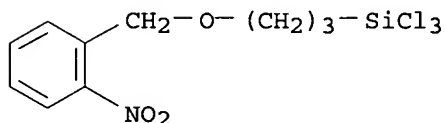
IT 404353-15-7P 404353-16-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of nitrobenzyl alkoxysilyl coupling agent)

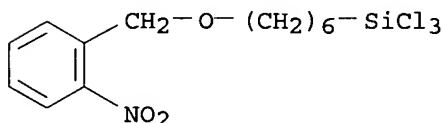
RN 404353-15-7 CAPLUS

CN Silane, trichloro[3-[(2-nitrophenyl)methoxy]propyl]- (9CI) (CA INDEX NAME)



RN 404353-16-8 CAPLUS

CN Silane, trichloro[6-[(2-nitrophenyl)methoxy]hexyl]- (9CI) (CA INDEX NAME)



L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2002:205086 CAPLUS

DN 136:247695

TI Nitrobenzyl group-containing chlorosilanes as coupling agents, and introduction of carboxy or hydroxy group to material surfaces using them

IN Yamaguchi, Kazuo; Futami, Tatsuhiro

PA Okamoto Kagaku Kogyo K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | JP 2002080481  | A2   | 20020319 | JP 2000-269904  | 20000906 |
| PRAI | JP 2000-269904 |      | 20000906 |                 |          |

OS MARPAT 136:247695

AB The compds. have SiClMe2, SiCl2Me, or SiCl3 at one terminal and ( $\alpha$ -substituted) p-nitrobenzyloxy group at the other terminal. 1-(2-Nitrophenyl)ethyl 4-pentenoate (preparation given) was hydrosilylated by HSiCl3 in the presence of H2PtCl6 to give 79% Cl3Si(CH2)4CO2CHMeC6H4NO2-o (I). A Si wafer was treated with C6H6 solution of I and irradiated by UV to give a surface-modified wafer with high contact angle.

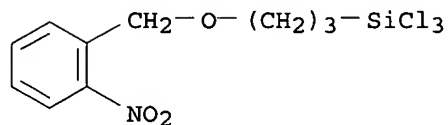
IT 404353-15-7P 404353-16-8P

RL: CPS (Chemical process); PEP (Physical, engineering or chemical

process); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(preparation of nitrobenzyl group-containing silane coupling agents)

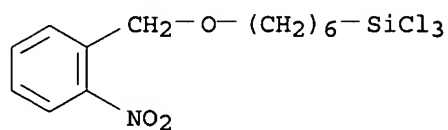
RN 404353-15-7 CAPLUS

CN Silane, trichloro[3-[(2-nitrophenyl)methoxy]propyl]- (9CI) (CA INDEX NAME)



RN 404353-16-8 CAPLUS

CN Silane, trichloro[6-[(2-nitrophenyl)methoxy]hexyl]- (9CI) (CA INDEX NAME)



=>

10/734,019 <sup>Reg File</sup> Comps. in cl. 9+10

(FILE 'HOME' ENTERED AT 10:32:21 ON 20 MAR 2005)

FILE 'REGISTRY' ENTERED AT 10:32:28 ON 20 MAR 2005

|     |                           |
|-----|---------------------------|
| L1  | SCREEN 2067               |
| L2  | STRUCTURE UPLOADED        |
| L3  | QUE L2 AND L1             |
| L4  | SCREEN 2067               |
| L5  | STRUCTURE UPLOADED        |
| L6  | QUE L5 AND L4             |
| L7  | 0 SEA SSS FUL L2 AND L1   |
| L8  | 0 SEA SSS FUL L5 AND L4   |
| L9  | SCREEN 2067               |
| L10 | STRUCTURE UPLOADED        |
| L11 | QUE L10 AND L9            |
| L12 | SCREEN 2067               |
| L13 | STRUCTURE UPLOADED        |
| L14 | QUE L13 AND L12           |
| L15 | 0 SEA SSS FUL L10 AND L9  |
| L16 | 0 SEA SSS FUL L13 AND L12 |
| L17 | SCREEN 2067               |
| L18 | STRUCTURE UPLOADED        |
| L19 | QUE L18 AND L17           |
| L20 | SCREEN 2067               |
| L21 | STRUCTURE UPLOADED        |
| L22 | QUE L21 AND L20           |
| L23 | 0 SEA SSS FUL L18 AND L17 |
| L24 | 0 SEA SSS FUL L21 AND L20 |
| L25 | SCREEN 2067               |
| L26 | STRUCTURE UPLOADED        |
| L27 | QUE L26 AND L25           |
| L28 | SCREEN 2067               |
| L29 | STRUCTURE UPLOADED        |
| L30 | QUE L29 AND L28           |
| L31 | 0 SEA SSS FUL L26 AND L25 |
| L32 | 0 SEA SSS FUL L29 AND L28 |

| Ref # | Hits   | Search Query                                                                                                   | DBs                                         | Default Operator | Plurals | Time Stamp       |
|-------|--------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---------|------------------|
| L1    | 0      | jp-2002080481-\$.did.                                                                                          | US-PGPUB;<br>USPAT                          | OR               | ON      | 2005/03/20 08:31 |
| L2    | 2      | jp-2002080481-\$.did.                                                                                          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:40 |
| L3    | 27420  | silane adj coupling adj agent                                                                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:10 |
| L4    | 262600 | image-forming or image adj forming                                                                             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:51 |
| L5    | 2336   | 3 and 4                                                                                                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:50 |
| L6    | 567    | (pattern or image-forming or image adj forming) same (silane adj coupling adj (agent or material or compound)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:52 |
| L7    | 499    | (pattern or image-forming or image adj forming) same hmids                                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:53 |
| L8    | 47     | (pattern or image-forming or image adj forming) near5 hmids                                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:05 |
| L9    | 24     | ((pattern or image-forming or image adj forming) near5 hmids) near5 (photoresist or resist or pr)              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:06 |
| L10   | 23     | 8 not 9                                                                                                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:06 |
| L11   | 1536   | (silane adj coupling adj agent) near5 (photoacid or onium or sulfonium or acid)                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:11 |
| L12   | 1050   | (silane adj coupling adj agent) near3 (photoacid or onium or sulfonium or acid)                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:11 |

|     |         |                                                                                                  |                                             |    |    |                  |
|-----|---------|--------------------------------------------------------------------------------------------------|---------------------------------------------|----|----|------------------|
| L13 | 65      | (silane adj coupling adj agent) near3<br>(photoacid or onium or sulfonium)                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 09:30 |
| L14 | 3346    | trimethoxysilyl                                                                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 09:51 |
| L15 | 8       | "413040".ap.                                                                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:44 |
| L16 | 310     | ("365" adj nm or 365nm) near5<br>(image or pattern or picture)                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:47 |
| L17 | 1093676 | positive                                                                                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:46 |
| L18 | 166     | 16 and 17                                                                                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:46 |
| L19 | 1       | ((("365" adj nm or 365nm) near5<br>(image or pattern or picture)) same<br>(acid adj generat\$3)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:49 |
| L20 | 9       | ((("365" adj nm or 365nm) near10<br>(image or pattern or picture)) same<br>(acid adj generat\$3) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:50 |



| Ref # | Hits   | Search Query                                                                                                   | DBs                                         | Default Operator | Plurals | Time Stamp       |
|-------|--------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|---------|------------------|
| L1    | 0      | jp-2002080481-\$.did.                                                                                          | US-PGPUB;<br>USPAT                          | OR               | ON      | 2005/03/20 08:31 |
| L2    | 2      | jp-2002080481-\$.did.                                                                                          | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:40 |
| L3    | 27420  | silane adj coupling adj agent                                                                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:10 |
| L4    | 262600 | image-forming or image adj forming                                                                             | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:51 |
| L5    | 2336   | 3 and 4                                                                                                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:50 |
| L6    | 567    | (pattern or image-forming or image adj forming) same (silane adj coupling adj (agent or material or compound)) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:52 |
| L7    | 499    | (pattern or image-forming or image adj forming) same hmids                                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 08:53 |
| L8    | 47     | (pattern or image-forming or image adj forming) near5 hmids                                                    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:05 |
| L9    | 24     | ((pattern or image-forming or image adj forming) near5 hmids) near5 (photoresist or resist or pr)              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:06 |
| L10   | 23     | 8 not 9                                                                                                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:06 |
| L11   | 1536   | (silane adj coupling adj agent) near5 (photoacid or onium or sulfonium or acid)                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:11 |
| L12   | 1050   | (silane adj coupling adj agent) near3 (photoacid or onium or sulfonium or acid)                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2005/03/20 09:11 |

|     |         |                                                                                                  |                                             |    |    |                  |
|-----|---------|--------------------------------------------------------------------------------------------------|---------------------------------------------|----|----|------------------|
| L13 | 65      | (silane adj coupling adj agent) near3<br>(photoacid or onium or sulfonium)                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 09:30 |
| L14 | 3346    | trimethoxysilyl                                                                                  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 09:51 |
| L15 | 8       | "413040".ap.                                                                                     | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:44 |
| L16 | 310     | ("365" adj nm or 365nm) near5<br>(image or pattern or picture)                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:47 |
| L17 | 1093676 | positive                                                                                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:46 |
| L18 | 166     | 16 and 17                                                                                        | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:46 |
| L19 | 1       | ((("365" adj nm or 365nm) near5<br>(image or pattern or picture)) same<br>(acid adj generat\$3)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:49 |
| L20 | 9       | ((("365" adj nm or 365nm) near10<br>(image or pattern or picture)) same<br>(acid adj generat\$3) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT | OR | ON | 2005/03/20 10:50 |